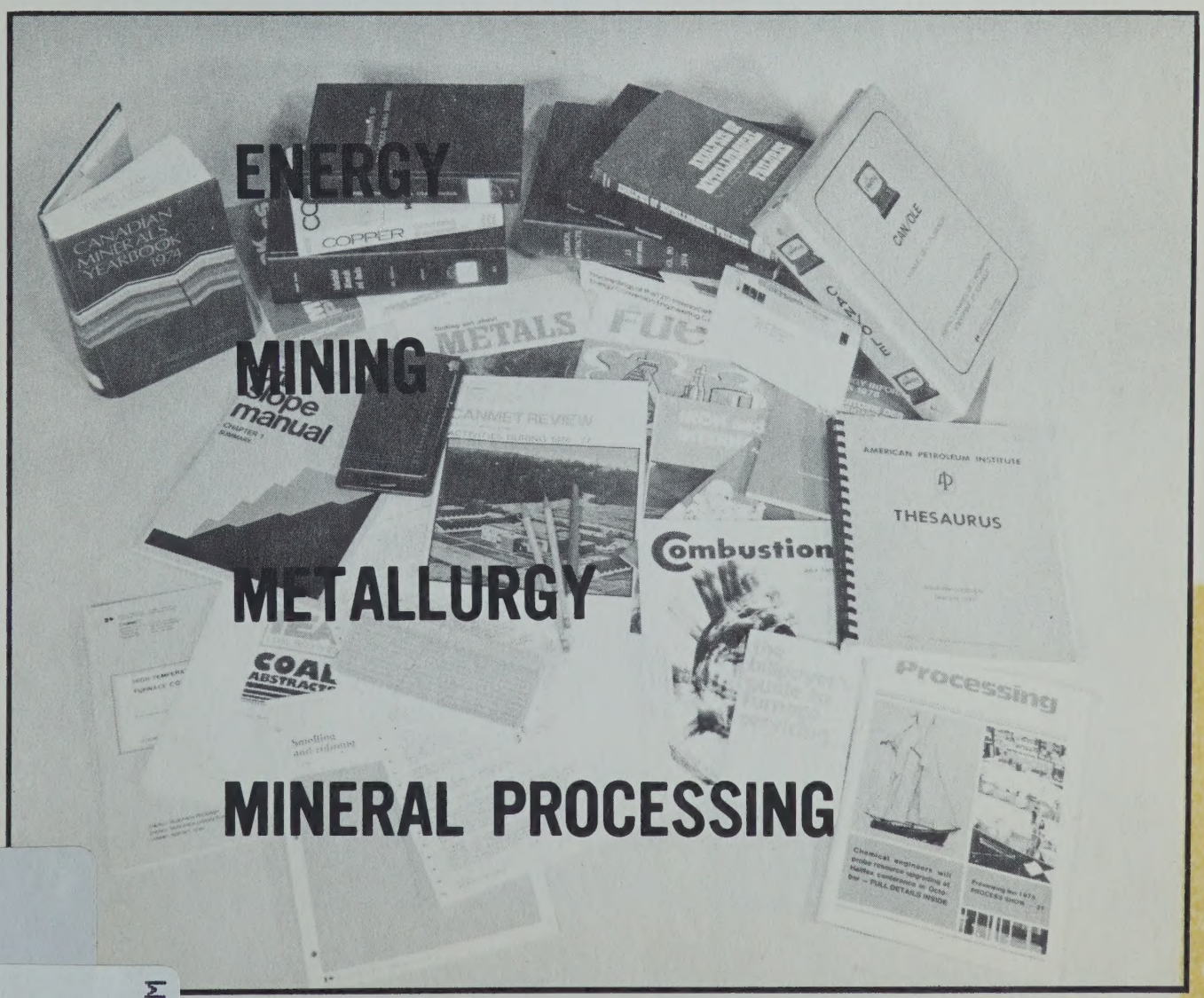
Energy, Mines and Resources Canada
Énergie, Mines et Ressources Canada

CANMET
Canada Centre for Mineral and Energy Technology
Centre canadien de la technologie des minéraux et de l'énergie

TECHNOLOGY INFORMATION SERVICES



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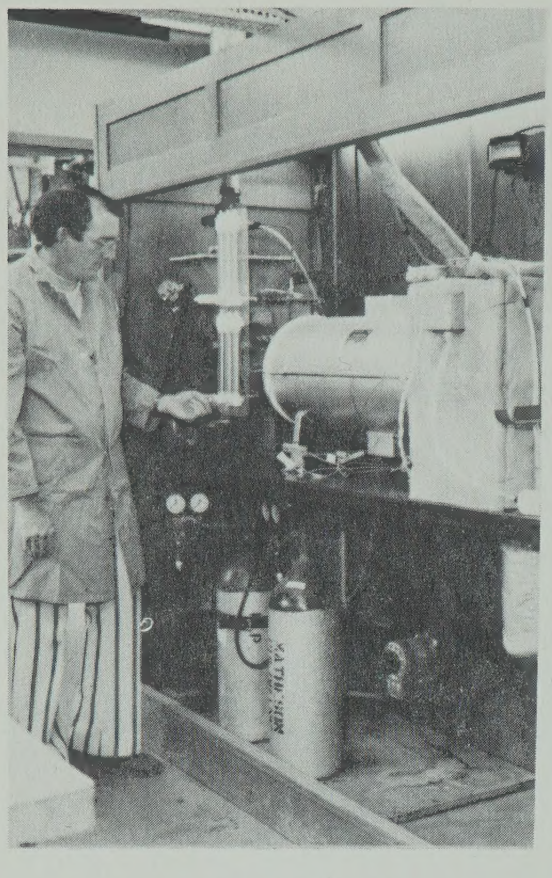

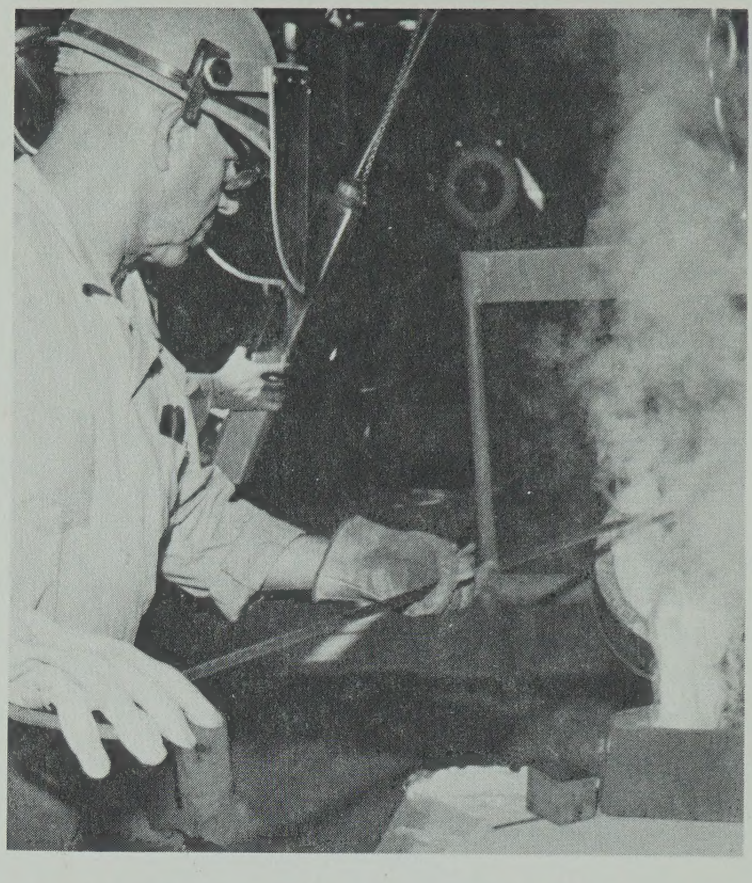

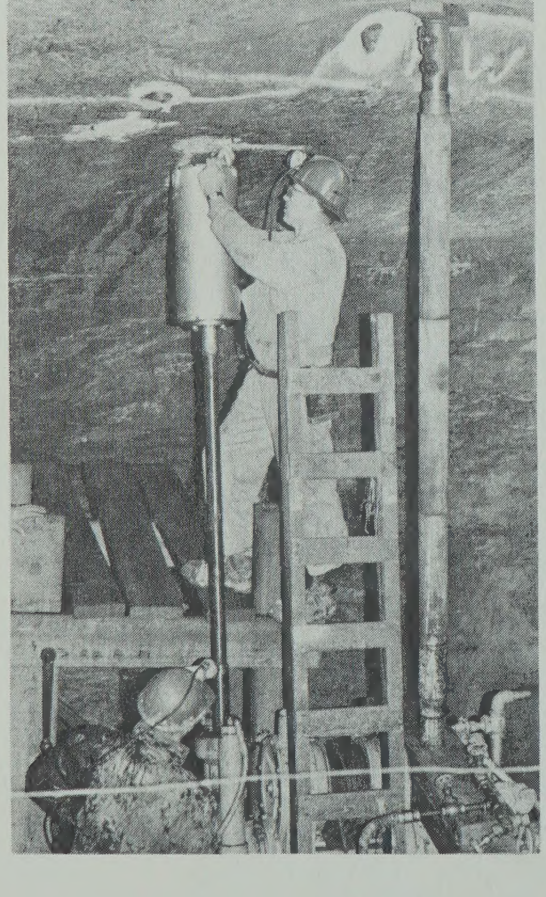

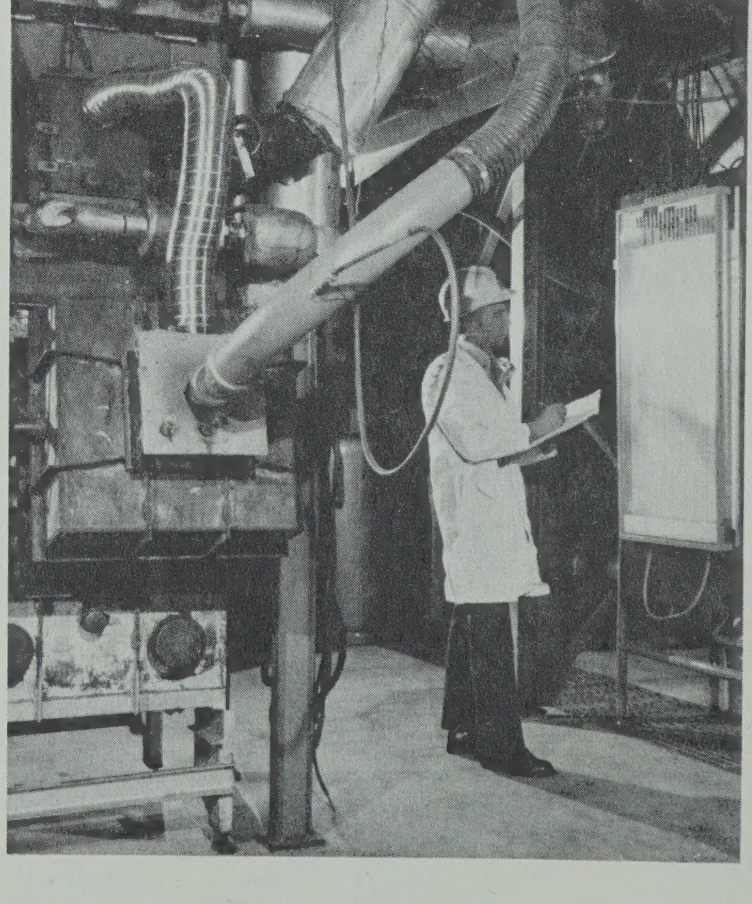

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TO HELP YOU KEEP PACE WITH TECHNOLOGY — A NEW INFORMATION SERVICE

Professionals working in science and technology know the importance of keeping up to date with new developments. In industry, application of recent technology can be a key to the profitability of an enterprise. In research, a scientist's progress — and his reputation — may hinge upon his awareness of studies reported by others throughout the world.

They also know that digging for information — whether to solve a specific problem or to keep informed on a continuing basis — can be tedious and time-consuming.

Recognizing this, the management of the Canada Centre for Mineral and Energy Technology has traditionally maintained a strong technology information service in the areas of its principal interests, namely energy and mining, metallurgy and mineral processing. Originally set up to assist our own research staff, the service has now been strengthened to serve the information needs of scientists and engineers in industry, government, universities and the general public across Canada.

As a research and development agency, we at CANMET are conscious of our national responsibility for the creation and dissemination of new technological knowledge in aid of the Canadian mineral and energy-related industries. Our 270 scientists and engineers are involved in technology transfer on a daily basis through research, evaluation, publications, participation in technical conferences and personal advice. To supplement these activities, the services of our team of information specialists — professionals trained in the range of CANMET research concerns — are now available to meet <u>your</u> information needs.

By using this service, you can save time and money because we do the digging. We can provide information in many forms, including bibliographies, technical and statistical summaries, CANMET publications, or as on-the-spot advice from our own practising experts.

We think this service may be of value to you, especially if you lack easy access to a specialized library or information centre. Why not contact us today? Whether or not your need is immediate, we'd like to talk it over with you. We also welcome comments on our services and any suggestions that might help us to help you.

Technology Information Division
Canada Centre for Mineral and Energy Technology
555 Booth Street
Ottawa, Ontario
K1A 0G1
Telephone (613) 995-4029, 995-4039
Telex 053-3395

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RESOURCES

CANMET is a progressive organization where the interdependence of research and information is well recognized. Our information specialists maintain a close relationship with our researchers in the two-way flow of information, assisting these researchers in their own needs and, in turn, drawing on their extensive expertise to help answer inquiries from other sources.

Frequently the information requested in an inquiry is already available as a CANMET publication. About 1000 reports and papers of every description are produced each year by CANMET staff. Some of these are sold or distributed through normal government channels, while others are available on open file. In addition, copies of reports on research carried out under contract to CANMET are also available.

A computer terminal provides immediate access to the world's leading machine-readable data bases. To ensure thorough subject coverage, we subscribe to several private and government-operated bibliographic services offering current information on publications, patents and research projects.

The CANMET Library holds a comprehensive collection of mineral and energy literature. With 37,000 books, 17,000 technical reports, and 87,000 volumes of serials (2,000 titles), as well as relevant indexing and abstracting journals, it is an important resource for conducting literature searches or seeking background information to help solve technical problems. As a participant in Canada's national system of inter-library lending, it can locate and borrow materials published anywhere in the world. The library's accessibility also makes it easier for CANMET information specialists to stay up to date with current developments. The main library is located in Ottawa, with branches at Edmonton, Calgary and Elliot Lake, Ontario.

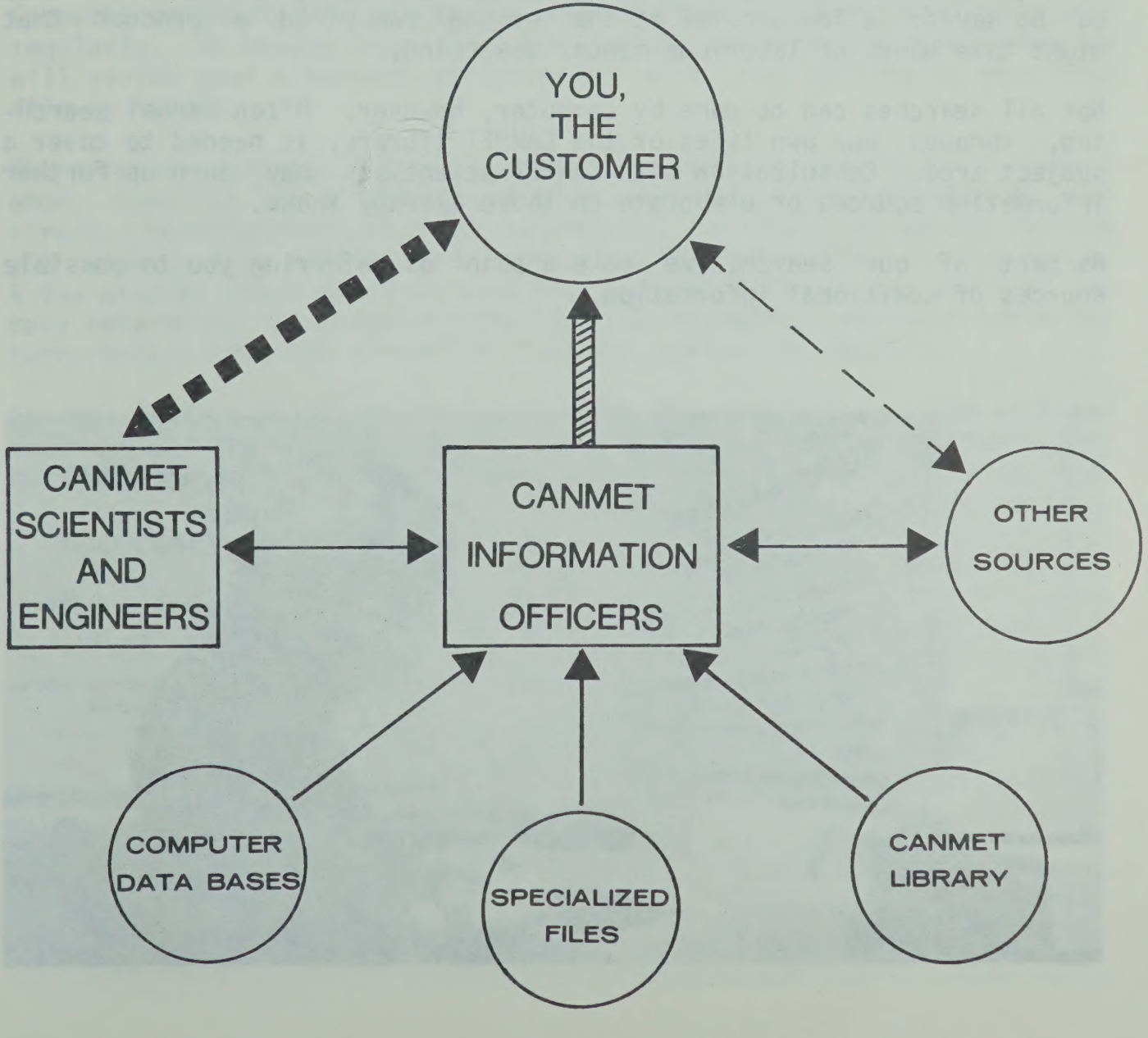
As an important participant in the national scientific and technical information network co-ordinated by the National Research Council's Canada Institute for Scientific and Technical Information (CISTI), we enjoy a reciprocal working relationship with CISTI's library and information staff. In addition, access to other government information outlets is facilitated by our Ottawa location.

Specialized reference files built up over many years are held at the technology information offices for immediate use by our information specialists. For example, a data base containing more than 18,000 references on mining alone is used regularly for manual or computerized searching.

ANSWERING TECHNICAL QUESTIONS

We are prepared to respond to technical inquiries of all types as quickly and thoroughly as possible. Questions involving straightforward technical matters can sometimes be answered by telephone. Solutions to technical problems may be worked out by consultation with CANMET's engineers and scientists.

More complex requests, dealing with recent technological developments, the state of the art in a particular field, or the availability of published literature in a specialty, are handled by using sophisticated information retrieval systems. Two of the most valuable techniques are retrospective searching and the current awareness profile.



RETROSPECTIVE SEARCHING

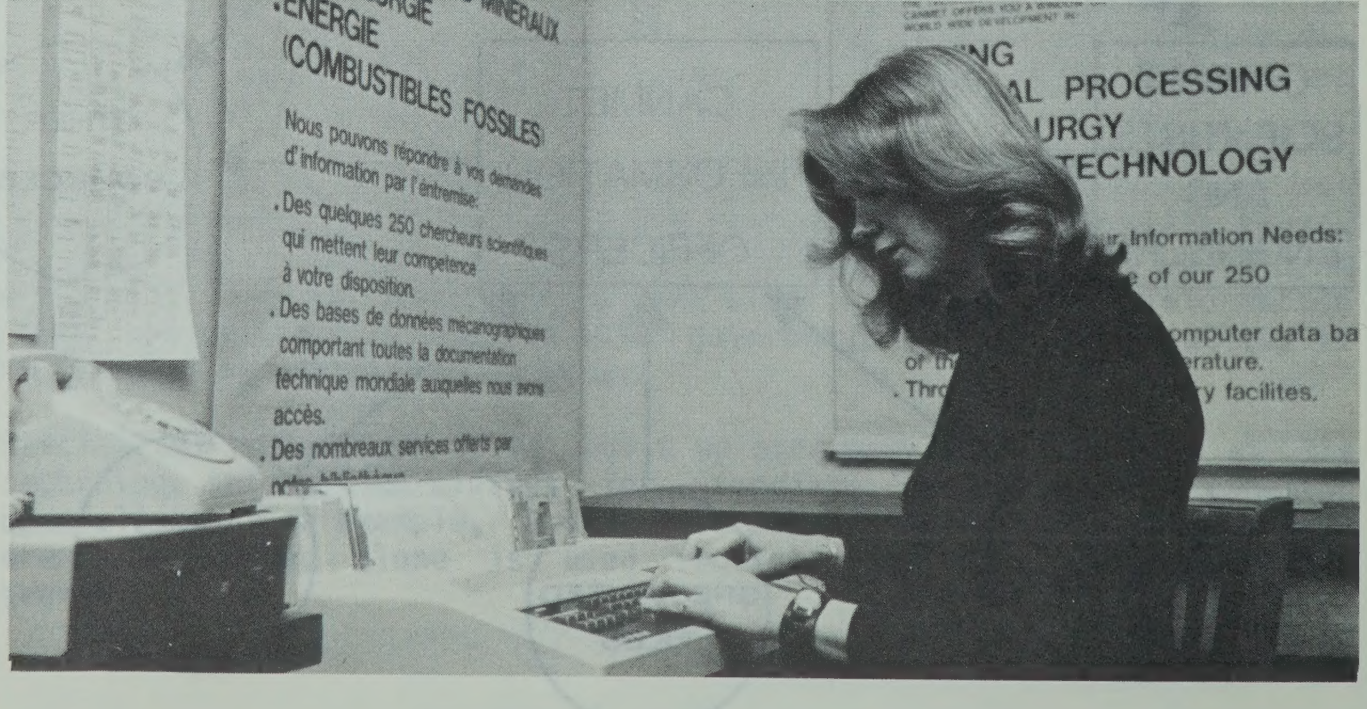
Retrospective literature searching is a technique that can be used to provide reference lists or to retrieve information that may be otherwise valuable in answering a technical inquiry.

Our computer terminal allows us on-line access to the most up-to-date bibliographic files containing millions of citations. By designing a search strategy in consultation with you, we can retrieve lists of references containing such information as title, author's name and affiliation, source of the publication, abstract, and keywords. Depending on the data bases used, a search can cover the literature of several years and languages. Most machine-readable files date back to the late 1960's or early 1970's.

But the greatest advantage of computerized searching is the time that can be saved: a few minutes at the terminal can yield a product that might take hours of laborious manual searching.

Not all searches can be done by computer, however. Often manual searching, through our own files or the CANMET library, is needed to cover a subject area. Consultation with CANMET scientists may turn up further information sources or elaborate on those already known.

As part of our search, we make a point of referring you to possible sources of additional information.


ENERGIE
(COMBUSTIBLES FOSSILES)
Nous pouvons répondre à vos demandes d'information par l'entremise:
. Des quelques 250 chercheurs scientifiques qui mettent leur competence à votre disposition.
. Des bases de données mécanographiques comportant toutes la documentation technique mondiale auxquelles nous avons accès.
. Des nombreaux services offerts par
PROCESSING
TECHNOLOGY
Information Needs:
of our 250
facilites.

CURRENT AWARENESS

CANMET's current awareness service is a convenient way of keeping informed of the most recently published literature in your field, and is recommended to supplement your usual reading. It is especially useful to learn of papers in publications to which you don't have regular access.

The service is a product of the Canadian Selective Dissemination of Information (CAN/SDI) network, operated in conjunction with the Canada Institute for Scientific and Technical Information (CISTI), National Research Council.

To use this system, we prepare a 'profile', or statement of subject interests in keyword form, with your help. This profile is then matched with new citations as they are received at CISTI on computer tapes. Computer printouts of references are thereby produced and mailed out regularly. To ensure that you are getting the most for your money, we will review your printouts periodically with you, and revise your profile as needed.

The printout contains all the information needed to identify a reference, such as title, authors, source, keywords, and sometimes an abstract. Perforations allow you to separate the citations easily in case you wish to file them or to request photocopies of specific documents. A few minutes spent going through the printout will provide you with as many references as several long hours in a library, and most libraries carry only a fraction of the publications covered by CAN/SDI.

Several leading data bases are available for searching. The cost and frequency of the printouts depend upon the data base selected, and are given on the last page of this brochure.

ENERGY

Recent uncertainties in world energy supply have prompted Canada, like many countries, to focus attention on activities aimed at national self-reliance. At the same time, public and industrial concern over energy use and energy research has grown rapidly, increasing the demand for scientific and technical information.

In response to changing energy priorities, we have stepped up research at CANMET in such areas as energy conservation, coal mining and processing, oil sands, and heavy oils, and also established an energy technology information service for Canadians working on fossil fuels.

Dealing with the many aspects of energy technology — deposit assessment, recovery, transportation, processing, utilization, waste disposal — this service covers all fossil fuels, including coal, oil sands, oil, gas, and peat.

Literature search and current awareness services are available. Also, technical questions can be answered by consultation with our staff at the Energy Research Laboratories in Ottawa and Edmonton, who have expertise in the practical and scientific aspects of fossil fuel technology.

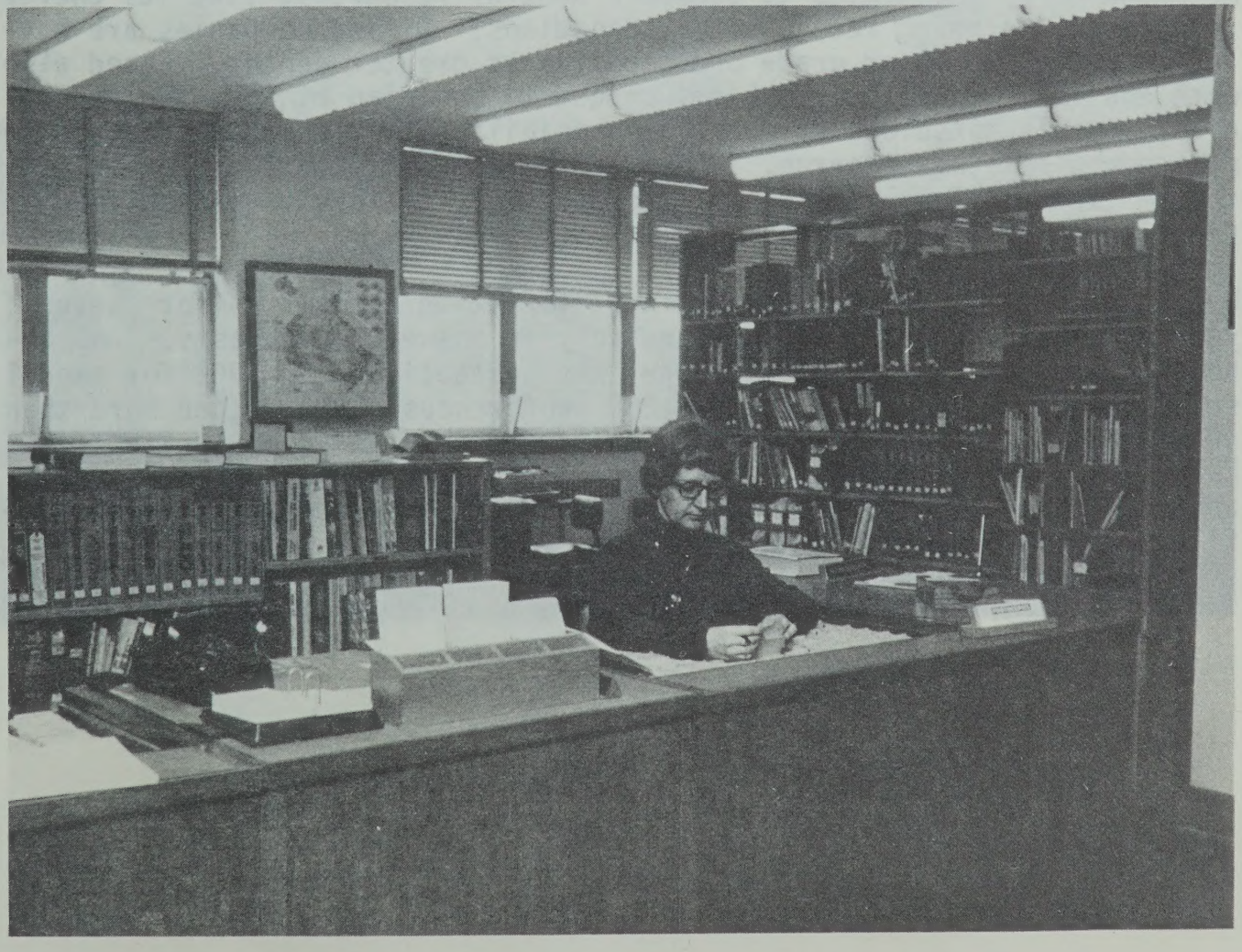
Bibliographic tapes available for searching through the CAN/SDI current awareness network include Chemical Abstracts, Engineering Index, and extensive files covering such fields as geology, physics and computer applications.

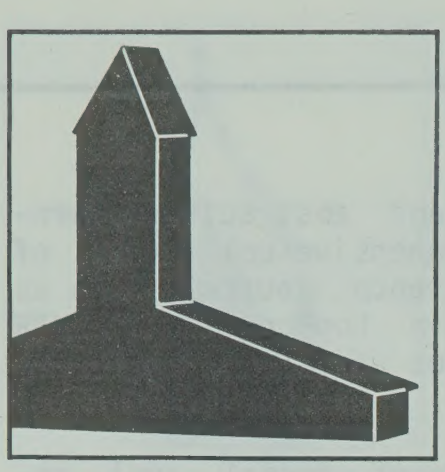
With access to several energy-related data bases, CANMET's computer terminal is a handy tool for quick retrospective literature searching. In addition to Chemical Abstracts and Engineering Index, we can scan files available through the American Petroleum Institute, the U.S. National Technical Information Service, the American Geological Institute, the Alberta Oil Sands Information Center, and several other sources.

The CANMET Library also holds all major indexing and abstracting journals in energy fields, and is building a comprehensive collection of energy periodicals and monographs. Other reference sources, such as Fuel Abstracts from the Institute of Fuels in London, and CERCHAR Abstracts from the Centre d'Etudes et Recherches des Charbonnages de France, are readily accessible.

Recently, CANMET began receiving microfiche copies of fossil fuel research reports from the United States Department of Energy. We can provide full page reproductions of these U.S. government-sponsored reports at a nominal cost.

We expect this service to play an important role in national information exchange. Dissemination of much-needed technical and scientific data is essential to support the rapid technological expansion required to meet Canada's goal of self-reliance.





MINING

This service covers all facets of underground and surface mining from discovery to processing, including:

- mine planning
- development and production methods
- ground control
- tunnelling
- materials handling
- working environment and safety
- waste disposal and land reclamation

for all commodities:

- metallic minerals
- non-metallic minerals
- solid fuels
- construction materials.

More and more, the limits to Canada's mineral resources, like its energy resources, are being recognized by Canadians. Mining companies are having to turn to lower grade ore deposits at greater depths. Faced also with the many technical problems unique to Canadian mining, the federal government is conscious of its responsibility to ensure progress in mining and related research. CANMET's mining information service is rooted in a national policy to promote the efficient extraction of Canada's minerals and fuels.

We have been involved in mining information activities for several years. Two files are used extensively in answering requests. An in-house file on mining technology was established in 1968 for manual searching, and by 1973 held 8,300 references. Since then more than 10,000 additional citations have been stored in a new computerized file. Each month, items of interest from more than 100 magazines and journals and numerous reports are selected, abstracted, indexed, and added to the file.

Other bibliographic files containing information on mining include Engineering Index, CERCHAR Abstracts from France, Safety in Mines Abstracts, Institution of Mining and Metallurgy Abstracts, Geotechnical Abstracts, and Geomechanics Abstracts. The CANMET Library, which holds an excellent collection of reference works on mining, is consulted for other literature, including leading foreign-language journals.

CANMET's Mining Research Laboratories at Ottawa, Elliot Lake, and Calgary employ more than forty engineers and scientists, specializing in many aspects of mining, including rock mechanics, slope stability and ground support, reserve assessment, explosives, the mining environment, computer applications, and land reclamation. The research program has been modified in recent years to reflect increased interest in such subjects as waste disposal and Western Canadian coals.

METALLURGY

In keeping with its role as a focal point for metallurgical research in Canada, CANMET has been designated the national CAN/SDI centre for METADEX, the machine-readable form of Metals Abstracts. Prepared by the American Society for Metals, this is an extensive file covering ferrous and non-ferrous metals and alloys, and related subjects.

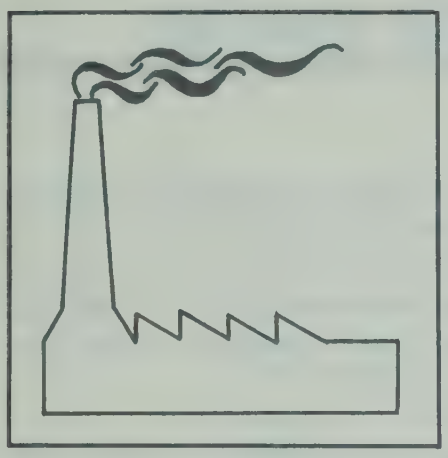
CANMET offers a current awareness service which alerts users to regular additions to this important data base. We will assist you to prepare a profile so that you may receive regular printouts of the most recent publications in your interest categories. Current awareness services are available as well on data bases such as Engineering Index, Chemical Abstracts, NTIS (U.S. Government Reports Announcement), and INSPEC (covering physics, electrical engineering, and computer applications).

Using these same files, and others such as World Aluminum Abstracts, retrospective literature searching can also be done quickly and effectively at our computer terminal.

All the major abstracting and indexing bulletins and reference works on metallurgical subjects are held by the CANMET Library. A manual search might cover such sources as:

- National Institute for Metallurgy Abstracts
- Corrosion Abstracts
- Metal Finishing Abstracts
- several sources dealing exclusively with specific metals.

The metallurgy information officer works in close relationship with the professionals of the Physical Metallurgy Research Laboratories.



MINERAL PROCESSING

As in all scientific and technical fields, information can play a major role in updating the complex processes of converting ores to metals and mineral commodities. If this is your specialty, CANMET can help you avoid costly delays in research or production by alerting you to the latest technical data.

More than 100 engineers and scientists work at CANMET's Mineral Sciences Laboratories. Their research covers all operational aspects of metallic and non-metallic mineral processing, including:

- mineralogy and petrography
- ore milling
- mineral separation
- extractive metallurgy
- mineral dressing
- chemical analysis
- waste treatment and utilization.

Complementing this expertise is an in-house computerized data base which contains more than 10,000 references on extractive metallurgy and related fields. This file is now being expanded and improved to provide more complete reference information on all aspects of mineral processing. By searching this file and other machine-readable sources, such as Chemical Abstracts and Engineering Index, we can answer requests for technical literature citations quickly and thoroughly. Add to this the extensive holdings of the CANMET Library, and the world's leading information sources are covered.

Through the CAN/SDI system, a current awareness service is also available to provide you with regular printouts of references from leading data bases in your field.

We think this information service can help you achieve such goals as:

- reduced operating costs
- increased productivity
- elimination of pollutants
- improved standards of efficiency and safety.

We understand the importance of these objectives to you because after all, they're our objectives too.

COSTS

In offering this service, CANMET has tried to keep costs as low as possible to benefit the maximum number of users.

Depending on the nature of the inquiry, a modest fee may be charged to help cover costs. If so, the information officer will let you know before proceeding with your request.

Current awareness profiles are subject to an annual fee which depends on the data bases searched. Examples of annual costs and frequency of printouts are:

Engineering Index	monthly	$ 69.00
METADEX	monthly	60.00
Geological Reference File	monthly	81.00
Chemical Abstracts	bi-weekly	84.50
Science Citation Index	weekly	148.20

CANMET technical reports are available at low cost. Purchase can be arranged by contacting CANMET Publications Office, 555 Booth Street, Ottawa K1A 0G1 (telephone 613-995-4087).

Photocopies

Photocopies of articles cited should be obtained through your own library if possible. Otherwise the information officer will provide guidance in obtaining the material.

Fees for photocopies (including full page printed copy of microfiche) are 22 cents per page, with a minimum charge of $2.20. Prepayment is required. Make cheques or money orders payable to the Receiver General for Canada. Please do not send cash through the mail.

HOW WE'VE HELPED OTHERS

* An engineer in industry needed information on coal mining technology in Canada. Here is how we answered his request:
  - by searching computerized data bases — including our own extensive file on mining technology — for bibliographic references; the printout included several CANMET reports as well as many other citations.
  - by locating items in CANMET's library which may be available in other Canadian libraries, or could be made available through the national system of interlibrary lending.
  - by putting him in touch with CANMET's own coal mining experts.
  - by providing details of other sources of information, including provincial officials, professional associations, and the coal mines themselves.

* A scientist studying fractography of cast stainless steels needed background information for his research project. We brought him up to date on progress in this specialty by the same methods given in the example above. But since he also wanted to be kept informed of new research progress, we arranged for him to receive monthly printouts of references from the METADEX file, through the CAN/SDI current awareness system.

* We are equipped to supply information on technology in many disciplines. Here are a few more examples of inquiries we have answered:
  - techniques for recovery of minor constituents in zinc concentrates.
  - materials used in Arctic pipelines.
  - Canadian research and patents pertaining to catalytic hydrocracking.
  - electrical regulations in Canadian quarries.
  - problems with electrostatic precipitators in thermal power plants.

THIS IS CANMET

The Canada Centre for Mineral and Energy Technology, the former Mines Branch, is the technology research and development arm of the Department of Energy, Mines and Resources. Established in 1907, CANMET has a staff exceeding 700, including more than 270 scientists and engineers, who work in four laboratory divisions:

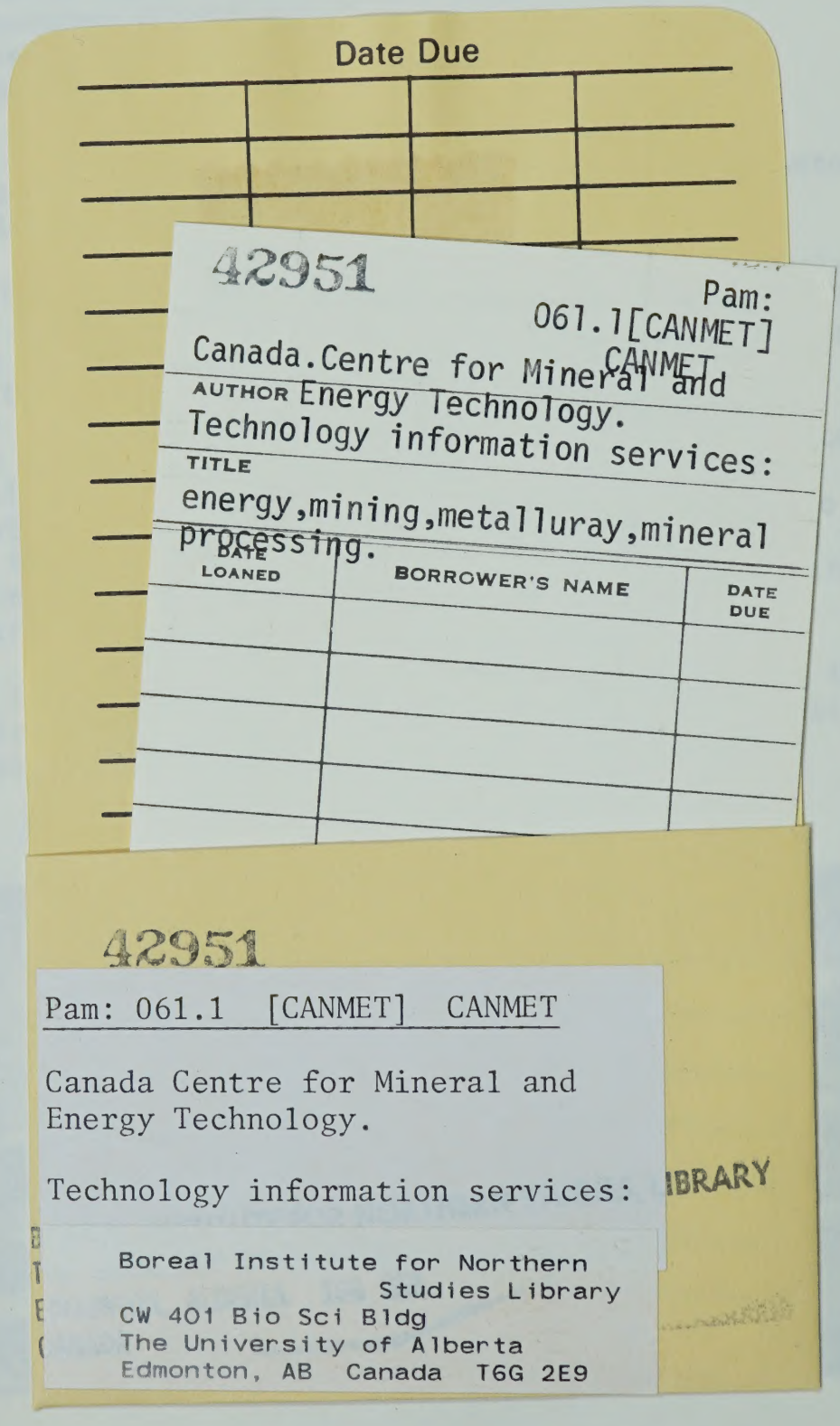
- Mineral Sciences
- Physical Metallurgy
- Energy
- Mining.

The laboratories are centred in Ottawa, with branches at Edmonton, Calgary, and Elliot Lake, Ontario.

CANMET's objective is to ensure the effective extraction, processing and use of Canada's minerals and non-renewable energy resources. Its research program is under continuing evaluation to reflect changing national priorities.

As a large and sophisticated research organization, CANMET is conscious of its potential to be the focal point for the dissemination of technological information in its subject fields. CANMET attempts to realize this potential through research publications, by participation in technical conferences and seminars, and by serving as an expert information source to research and production personnel throughout Canada.

The Technology Information Division plays an important role in this process by providing a specialized information analysis, processing, retrieval and dissemination capability.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